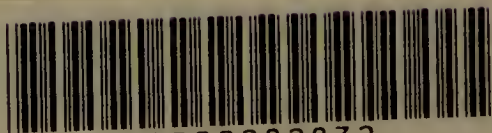


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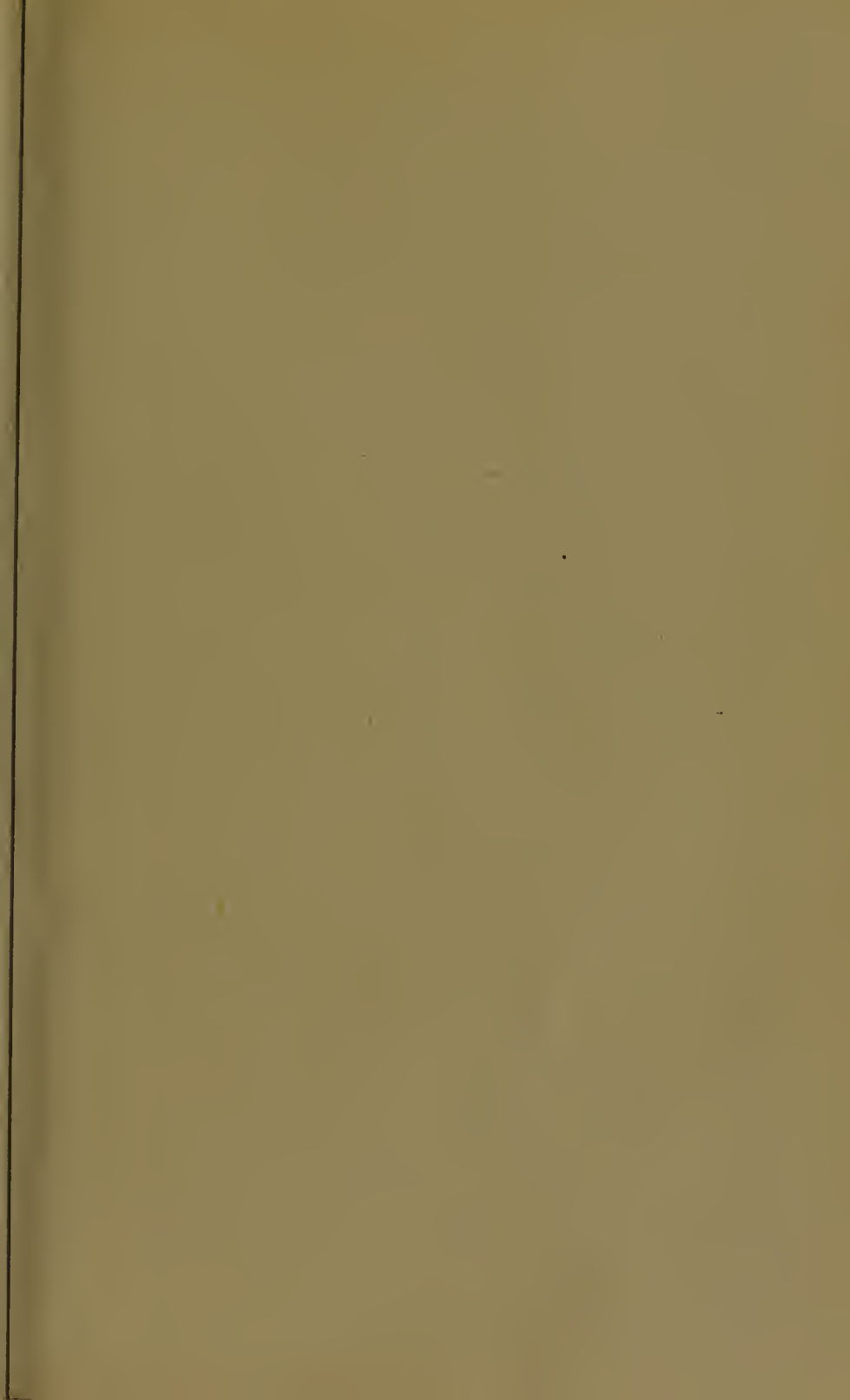
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A PRACTICAL INQUIRY
ON THE
VAPOUR OF CHLOROFORM
AS A
LOCAL APPLICATION.

BY
S. L. HARDY, M.D., F.R.C.S.,
EXAMINER IN MIDWIFERY AND DISEASES OF WOMEN AND
CHILDREN, ROYAL COLLEGE OF SURGEONS, IRELAND;
EX-ASSISTANT-PHYSICIAN, LYING-IN HOSPITAL, ROTUNDO;
PHYSICIAN TO THE INSTITUTION FOR DISEASES OF CHILDREN,
ETC. ETC. ETC.

DUBLIN :
PRINTED BY THOMAS DEEY,
AT THE MEDICAL PRESS OFFICE, MOLESWORTH-STREET.
1854.

8963

Doctor Barry
with Dr Hardy's Compl

Doctor Hardy

Dublin

May 14. 53

Dear Sir

I send you a bill
from Robertson the broker
of the Chloroform Institute
You can procure the
in London —

My first paper
appeared in the Dub.
Q. Journal for Nov. 1853

The pamphlet which
accompanies this will

tell the extent to which
Chloroform Vapor has
been used in the practice
of many medical men

Dr Butcher kindly
gave me his paper
for you which appeared
in the present No. of
the Dub. Q. Jan
(May 1855) You will see
some cases in particular

supported by him of injury
to the hand in the
treatment of which
used the hope of
relief with considerable
benefit—

I shall feel much
pleasure in affording
you any additional
information within my
power should you in
the least find any.

difficulty in using
the instrument. The
strength of the Chloroform
is much increased by
heating it in the metal
ball which is attached
to the large instrument.

I am very dear

Yours

S. L. Haas



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AS A

LOCAL APPLICATION.

BY

S. L. HARDY, M.D., F.R.C.S.,

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THE following is a reprint of a Paper which was lately published in the DUBLIN MEDICAL PRESS. Since it appeared in that Periodical, it has been enlarged by additional Cases and Observations.

S. L. H.

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A PRACTICAL INQUIRY, &c.

SINCE the local application of chloroform vapour was first introduced to notice, there has existed considerable discrepancy of opinion as to its efficacy. In some instances the results obtained by it have been most satisfactory; while in others we are told it was perfectly inert.

By an inquiry into the advantages derivable from its application to the surface of the skin and mucous membrane under various conditions, it seems to me that much of the uncertainty which at present prevails as to its utility might be removed, and an amount of knowledge acquired of so practical a nature as would remove the apathy of some who think little of its worth, and direct, with more certainty, the efforts of others who have resorted to it in cases in which it could not have been expected that its influence should have been exerted with any decided effect.

In order to prosecute this inquiry, I have collected a number of cases from various sources, which are, in some instances, accompanied with observations by men whose opportunities for observing the action of remedies should render their opinions of considerable value.

In applying chloroform vapour to either skin or mucous membrane, it is necessary to attend very particularly to

the condition in which those tissues are at the time, as the effect of this agent will be more or less marked according to circumstances. The subject therefore should be considered under the four following conditions :—

- 1ST. THE EFFECTS PRODUCED BY THE VAPOUR OF CHLOROFORM WHEN APPLIED TO THE SURFACE OF THE UNBROKEN SKIN.
- 2ND. DITTO, WHEN THE CUTICLE IS REMOVED.
- 3RD. DITTO, WHEN APPLIED TO MUCOUS SURFACES UNBROKEN.
- 4TH. DITTO, WHEN APPLIED TO MUCOUS SURFACES IN AN ABRADED CONDITION.

FIRST CONDITION.

THE EFFECTS PRODUCED BY THE VAPOUR OF CHLOROFORM WHEN APPLIED TO THE SURFACE OF THE UNBROKEN SKIN.

We are naturally led to expect but little effect from the application of vapours to the surface of the body, the cuticle being entire. Nevertheless, however contrary it may appear, there seems to be sufficient evidence, from the results obtained in many instances, to prove, that even under such unfavourable circumstances, the vapour of chloroform exerts very considerable influence. The following cases are given in illustration :—

No. 1.—Case of Femoral Hernia.

At a meeting of the Surgical Society, held on the 8th of April last (reported in the MEDICAL PRESS, April 19th), Dr. Forrest detailed the following case :—

“I was called to a lady, aged 60, who had suffered for several years from femoral hernia. On the present occasion, the tumour protruded a good deal, and was so exceedingly painful that the taxis could not be properly applied. I now directed a stream of chloroform vapour over the part with the happiest results. It completely relieved

the patient of the distressing sensations caused by the strangulation, and afforded opportunity for resorting to the surgical manipulations usual in such cases."

No. 2.—Case of Tetanus.

(Under the care of Dr. KIRKPATRICK,
Medical Attendant to the North Dublin Union.)

——, a labourer, ætat. 30, was admitted into the North Union Workhouse, June 7, 1854, sent from Manchester Infirmary, where he had been a patient, with disease of the right hip. In the workhouse, a part of the treatment consisted in a large caustic issue, made with potassa cum calce, over the ilium, an inch external to the seat of pain. On the twelfth day the slough came away on the poultice without any suffering. On the morning of the day following he was seized with spasms, which commenced at the right side low down, and rapidly engaged all the muscles of the trunk, both anterior and posterior. Before two o'clock p.m., the throat and jaws were affected, the mouth being opened with pain and difficulty. On the 21st Mr. Robertson, instrument-maker, spent several hours applying the vapour of chloroform locally.

On the morning of the 22nd he lay on his left side, with the right extremity extended and resting on a stool behind him outside the bed, as he was quite unable to flex or draw it up to him, nor could this be done for him owing to its rigidity. He complained of great pain in the issue, the posterior lower third of the thigh, and in the calf of the leg. Chloroform vapour applied by the vapour douche to each of those places relieved him in about ten minutes, and in about twenty he was able to raise and draw his leg into the bed. He then turned on his back, and afterwards during the day was able to rise and sit on a chair.

Dr. Kirkpatrick remarks, throughout the course of the

disease (which terminated fatally on the ninth day), chloroform was used to relieve agony by inhalation and local application of the vapour. The action of the remedy was most satisfactory in producing relief. A few drops on a piece of lint held to his face was sufficient to cause tranquil sleep.

The local application of the vapour was of marked service in relaxing severe spasm of the right lower extremity, also in causing some relaxation of the muscles of the jaw, so that the teeth could be more separated. It also diminished the pain when applied to the ulcer on the hip and to blistered surfaces on the spine and epigastrium. It was confined to the affected parts by means of a glass bell attached to the tube of the douche. It was also caused to surround the pelvis by the use of air-tight drawers: and lastly, it was thrown into the rectum.

No. 3.—Second Case of Tetanus.

(Under the care of THOMAS WOODS, M.D.,

Physician to the Killyon and Ballybrit Dispensaries in
Parsonstown and Roscrea Union.)

A poor man received a lacerated wound of the thumb and forefinger. On the fifteenth day afterwards he felt rigidity of the muscles of the neck, with difficulty of swallowing; in fact, trismus had set in. The disease increased for five days, but with the exception of an occasional spasm, extending from the diaphragm out through the back and up the back of the neck, producing slight opisthotonus, the rigidity and spasm were confined to the neck and jaws. I treated him with *Cannabis Indica*, mercurial and belladonna frictions, occasional enemata of turpentine and tobacco, croton-oil purgatives, blisters to the hypochondrium, &c.; but on Saturday (the day I received the douche) he was in the following state:—Neck and jaws

quite rigid ; so much so, that a piece of wood, which the friends had placed between his teeth, was too firmly held there to be removed ; inability to swallow for thirty-six hours ; risus sardonius very marked ; occasional spasm of diaphragm, producing slight opisthotonus. Altogether, his state was such that I, as well as another professional man, said there was no hope of his recovery. Under these circumstances I applied the douche. I continued forcing the vapour of chloroform on the muscles of the neck and jaws for perhaps half an hour. At length the spasm gave way, the piece of wood so obstinately fixed between the teeth came out, and he so far recovered the muscular power as to open his mouth to put out his tongue, and he managed to drink a cupful of broth. I have rarely felt more pleasure than when witnessing the almost miraculous effect the douche produced. The rigidity of the jaws and neck has not been as great at all since the douche was used, now twenty-four hours.

Parsonstown, August 6, 1854.

In answer to a letter, inquiring from Dr. Woods whether he thought the vapour could have been inhaled while he was applying it to the under part of the lower jaw, I received the following reply :—

“ Dear Sir,—I have just seen the man with tetanus, and although not quite free from it, I have no doubt of his recovery. When I applied the douche to the rigid muscles of his neck, he must have inhaled some of the chloroform, as I gave it to him liberally (there was, however, no appearance of it as to sleep, &c.) ; but I made to-day a very satisfactory trial of the douche locally. The spasms in the back were distressing him very much this morning, causing slight opisthotonus and intense pain. I stripped and

watched the back for some time, and at every spasm the spine was bent in, just at the lumbar region, the head slightly thrown back, and a beautiful radiation of muscular contraction occurred, having its centre in the lumbar vertebræ, and running up the latissimi dorsi and down the glutæi on each side. I immediately applied the douche assiduously to the loins, and kept up the action for about a quarter of an hour. He experienced the greatest relief, and longer duration of ease between the spasms. I showed the friends how to use the douche, leaving them a bottle of chloroform, and this evening, after having it thus applied to the back frequently, and always with marked relief, he has been for some time entirely free from pain, and ascribes the relief altogether to the douche. I asked him particularly about it, and he says he could not be mistaken. The pain was always soon mitigated, and he hopes now nearly entirely removed by the application. I was careful not to let him get any chloroform by inhalation, in order that the test might be the stronger, and I have no doubt but that the douche acted altogether through the integuments, and most beneficially. The only treatment beside the douche at present adopted is, croton-oil purgatives, combined with a little opium. I am almost sure the man will get well; if so, I will ascribe his recovery to the douche.

I remain yours very truly,

THOMAS WOODS.

Parsonstown, August 10, 1854."

In a few days after Dr. Woods kindly sent me the following letter :—

"My dear Sir,—The man who had tetanus is now quite recovered.

I remain yours truly,

THOMAS WOODS.

Parsonstown, August 27, 1854."

No. 4.—Phthisis.

A lady, in the ninth month of pregnancy, far advanced in phthisis, suffered very much from the frequency of cough, particularly during the night, which various sedatives failed to relieve. Over the affected lung, where the skin was unbroken, but tender, owing to frequent blistering, I had chloroform vapour applied by the douche, and confined to this part by a bell-shaped receiver. It had the effect of quieting the cough and of enabling the patient to sleep much better.

Chloroform manufactured in two different places was used in the treatment of the case; that which caused the most soothing effect felt more pungent on the skin during its application than the other.

No. 5.—Case of Neuralgia.

The MEDICAL PRESS for June 28, 1854, p. 410 (Mems from our London Correspondent), informs us “that a long discussion has again taken place in Paris relative to Dr. Hardy’s apparatus. M. Bichât says the local action of chloroform is proved by results truly surprising (“les resultats vraiment suprenant”), and gives two cases of his own which had resisted opiates and quinine; one in particular, of horrible agony in the arm and shoulder from neuralgia, cured by Dr. Hardy’s apparatus.

No. 6.—Case of Crick in the Neck.

M. Bernardet said that one of his sons having been seized with a violent crick in the neck, he treated it unsuccessfully by leeches, antispasmodics of several kinds, and by soothing liniments. He then had recourse to the vapour of chloroform, directed on the seat of pain, by means of Hardy’s apparatus, when the pain instantly ceased,

to return no more.—*L'Union Médicale*, October 17, 1854, p. 507.

No. 7.—Second Case of Neuralgia.

(From Mr. SMYLY, Surgeon to the Meath Hospital, &c.)

My dear Hardy,—My patient, a lady advanced in life, suffered intensely from a neuralgic pain, which came on every night for some time past. A variety of treatment (constitutional and local) was tried without advantage—opiates, aconite, &c. The local application of chloroform was proposed, but at first rejected by the lady's daughters, who were to have used it, as the lady lived some miles from Dublin, and the pain came on in the middle of the night, so that it was inconvenient to have a medical attendant at the time. Another night of suffering forced her daughters to lay aside their apprehensions of the dreaded chloroform, and to come to be instructed in the use of your instrument. Its effects were amazing. The pain came on as usual. The douche was applied, and the pain soon subsided. It recurred again that night, but so slightly that the lady did not acquaint her attendant. It has never returned since, although she has moved into town. I fear I have little chance of getting back my apparatus, as the box is taken possession of, and lies on the chimney-piece, ready for use, should it be required. It is supposed to possess some wonderful power, and nothing less than a charm.

Yours truly,

J. SMYLY.

Merrion-square, November 16, 1854.

No. 8.—Third Case of Neuralgia.

On the 17th of November, a lady was sent to Mr. Robertson, by her medical attendant, to have a chloroform vapour bath. She had suffered so much for the last nine

months from violent neuralgia in the side of her head, face, and nose, that she frequently longed for death to put an end to her agonizing complaint. Every remedy that could be thought of had been tried in vain.

In twenty minutes all trace of pain was removed by the chloroform and hot water douche. She said that but for its application she should have had the pain for three hours, from its setting in until it had subsided.

20th : The douche was again used, and perfect relief obtained in the same space of time.

21st : Since the application that was made on the 20th, the pain returned in a very mitigated degree, and but for a short time ; the patient had a tolerably good night, and felt better this morning than she had for months past. It was again administered to-day for the third time.

No. 9.—Dysmenorrhœa.

In the month of July last, I was hastily summoned to an unmarried patient, ætat. about 26. On my arrival she was in bed, tossing about her limbs and grinding her teeth, her countenance expressive of great suffering, which came on in paroxysms. At each exacerbation, she pressed firmly with her hands over the region of the uterus, which led me to suspect the approach of a menstrual period as being the cause of her distress. One of her friends afterwards told me she was subject to severe pain on those occasions. A sinapism laid over the abdomen had no effect in rousing her, nor was consciousness restored until a handkerchief, moistened with chloroform vapour, was applied to the vulva, which immediately caused her to exclaim, owing to the heat imparted by it. In about five minutes she had no pain whatever. The secretion soon followed without any more disturbance.

No. 10.—Cholera.

During the last few months instances of diarrhœa have been very prevalent in Dublin. The administration of chloroform in frequently-repeated doses of from fifteen to twenty-five drops in a little cold water had a most excellent effect in relieving nausea in those cases, and of imparting a sensation of general warmth; but as the influence exerted by this method of exhibiting it was of short duration, a much more decided and permanent benefit was obtained by applying the vapour by means of a sponge, moistened with chloroform, and placed in a tumbler. This applied over the epigastrium never failed in giving relief, and could be kept on constantly without the least inconvenience to the patients, who very soon became so convinced of its efficacy, that they anxiously wished for its continuance. (Care was necessary not to allow the fluid chloroform to touch the skin, as it felt so very hot; this, however, was easily accomplished by using a sponge sufficiently large to fill the end of the glass.)

No. 11.—Encysted Tumours of the Scalp.

(From Mr. SMYLY, Surgeon to the Meath Hospital, &c.)

My dear Hardy,—I have just used your anæsthetic vapour douche with such pleasing result that I cannot refrain from letting you know, as I am sure it will gratify you. A patient had four encysted tumours to be removed from the scalp. With the first and largest, I used the douche. She expressed the greatest surprise when informed that it was removed. With the second I did not use the douche. With this she experienced considerable pain during the operation and subsequently, even after the other two were incised (with which the chloroform and douche were used, and with equal advantage as in the first) this continued

to give pain. Some months ago Dr. Montgomery and I removed an encysted tumour from the scalp, having previously used the chloroform as you direct; but as there was but one tumour, and the patient a particularly good one, we could not judge from what amount of suffering she had been relieved.

Believe me to be yours truly,

J. SMYLY.

Merrion-square, October 18, 1854.

No. 12.—Gout.

(Treated by Dr. V. RENOARD.)

On the morning of the 25th the pain was most intense. It increased during the day, and in the evening wrung cries from the patient, who writhed upon his bed, biting and tearing the sheets. The night passed without the least relief, notwithstanding the internal and external use of narcotics. The foot was œdematous; the skin was tense, and of a shining rose-colour. On the morning of the 26th, having exhausted my resources, and being unable to remain an inactive spectator of such acute sufferings, I proposed the local application of chloroform, which was at once agreed to. Having procured Dr. Hardy's instrument, I commenced at noon the insufflation of the anæsthetic vapours, directing them chiefly to the most painful part. After twenty minutes' application, which was twice or thrice interrupted, reducing the real duration to sixteen or seventeen minutes, the patient felt well enough to request its suspension. He did not say that he was free from all suffering, but that he was considerably relieved. The part subjected to the vapour of chloroform had become pale and cold, instead of red and burning, as it had been before. Moderate pressure could now be made without exciting the sensibility of the patient, who so

short a time before could not endure the slightest touch. The calm lasted an hour and a half or two hours ; the pain subsequently appeared to return, and continued increasing until evening. When I saw the patient again, between eight and nine o'clock, he was suffering much, although less than on the preceding evening ; he was particularly apprehensive about the night. At the same time, the central point of the pain had changed its place a little ; it was nearer the internal ankle. The anæsthetic vapours were again applied uninterruptedly for fifteen minutes. All suffering ceased ; what had been the principal seat of the pain could now be tolerably strongly leant on without the patient feeling it. After a few minutes he fell into a deep sleep, which lasted two hours. On awaking, he experienced merely a feeble sensation of pain, some transitory twitchings returning at shorter or longer intervals, which did not prevent him from taking several other naps in the course of the night. From this day he quickly recovered. The attack was shorter than those of the two preceding years. The resolution of the congestion appeared to be more rapid than usual.

On the foregoing case, the editor of the *Revue Médicale* observes—" We cannot, in this case, fail to recognize the beneficial effects of the vapour of chloroform on the intolerable pain of gout ; but its influence on the resolution of the œdema, although probable, does not appear to me to be sufficiently proved."—*Gazette des Hôpitaux*, 23rd September, 1854, p. 451.

No. 13.—Rheumatic Gout.

On the 26th of October, a gentleman, who had suffered severely from frequent attacks of rheumatic gout, was directed by his medical attendant to have the vapour of chloroform applied to his foot, which was exceedingly

painful. Mr. Robertson (the maker of the instrument), by means of the vapour douche, gave a bath of chloroform and warm water vapours combined. In a quarter of an hour he felt perfectly easy. Having dined with a friend, and partaken of champagne, his distress returned ; and on the 28th of October the bath was repeated. In three minutes all suffering was removed ; and after its use for a quarter of an hour, he said he never was more free from pain in his life. On the 30th he had another bath for a mitigated return of the pain, and with equally favourable results.

No. 14.—Ulceration of the Cartilages.

I have been informed by Mr. Brown. Resident-Surgeon in Steevens' Hospital, of a case of ulceration of the cartilages of the knee-joint, in which great relief from pain was obtained by baths of chloroform and hot water applied by the vapour douche.

References.—See *Dublin Journal* for Nov., p. 315 :—“ The effects of chloroform vapour on the nipple of a female breast.” Also, Case 6—“ Its effects when applied to the surface of a breast affected with inflammation.”

SECOND CONDITION.

THE EFFECTS PRODUCED BY THE VAPOUR OF CHLOROFORM
WHEN APPLIED TO PARTS DENUDED OF CUTICLE.

When the cuticle is removed, either by abrasion, vesication, ulceration, or incision, the vapour of chloroform is enabled to act with much greater intensity than when the skin is unbroken. Whenever it is first brought in contact with parts in this condition, some patients complain of heat, others say it feels cool ; in a few minutes a sensation is imparted of ease and freedom from pain, which in some

instances is of very considerable duration. The following cases are given in illustration:—

No. 15.—Case of Anthrax.

(From CHARLES BENSON, M.D.,
President of the Royal College of Surgeons of Ireland.)

An unmarried lady, ætat. about 36 years, highly nervous, and very impatient of pain, lately consulted me for anthrax, situated on the back of the neck, which was a little ulcerated and most painful. I proposed the inhalation of chloroform, to which she strongly objected, but consented gladly to its local application. The vapour was closely confined to the sore, and first produced a sensation of extreme heat, which was soon succeeded by perfect relief from suffering. A free crucial incision was then made, which did not give her the slightest uneasiness. She said the operation had not hurt her in the least; everything afterwards went on favourably.

No. 16.—Second Case of Anthrax.

(Communicated by E. A. WHITE, Esq., M.R.C.S.I.)

A gentleman, ætat. 35, of very excitable temperament, consulted me for an anthrax situated on the nape of his neck, which was highly inflamed, ulcerated, and exquisitely painful. I applied chloroform vapour by means of the douche, which at first produced a hot sensation, as if a jet of steam had come upon it; this feeling was but momentary. I continued the application for about three minutes, then pricked the surface of the tumour without causing any indication of pain, and finally laid it open by an incision of an inch and half in length, the patient being wholly unconscious of the operation having been performed.

CASES ILLUSTRATING THE EFFECT OF CHLOROFORM
VAPOUR WHEN APPLIED TO ULCERS.

(From Dr. WILMOT, Surgeon to Steevens' Hospital.)

No. 17.—Syphilitic Ulcer.

My dear Hardy,—Of the cases in which we tried the local application of the vapour of chloroform in Steevens' Hospital, two seem to me more particularly worthy of notice, as showing not alone its efficacy in producing local anæsthesia, but the conditions which are necessary for its complete manifestation. One case is that of a man who suffered from extensive syphilitic ulceration on the forepart of the right leg, accompanied with superficial exfoliation of the tibia, and some periosteal inflammation along the bone. This ulcer was extremely painful, and in one spot especially, where the ulcer had cicatrized, the slightest touch was insupportable. I thought this an excellent case in which to test the efficacy of the local application of the vapour of chloroform. Your instrument (*the one last invented*) was accordingly called into requisition. After it had been worked for about two minutes, the patient expressed himself greatly relieved from pain, and in three minutes more the anæsthesia was so complete that he allowed the part to be handled, and evinced no pain when firm pressure was made with the fingers along the bone. This tolerance of pressure was very remarkable at the spot where the sensibility had been so much exalted. I am certain that had it been necessary in this case to have made an incision, a little further application of the chloroform vapour would have rendered the operation painless. The patient stated that the anæsthesia lasted a considerable time.

No. 18.—Ulcer on the Leg.

The second case is that of a woman who had an ex-

tremely painful ulcer on the right leg, a little above the external malleolus. She could not bear it to be touched, and refused to let it be strapped, owing to the severe pain produced by the necessary pressure. Your apparatus was resorted to ; and in a very short time the sensibility of the sore became blunted, and she permitted it to be handled and firmly pressed with the fingers.

These two cases strikingly demonstrate the power of the vapour of chloroform to produce local anæsthesia. The employment of it in certain ulcers of the leg, will, I feel confident, be found not the least useful of the purposes to which it may be applied. Every practical surgeon is acquainted with a small irritable ulcer which shows itself on the leg, generally above either malleolus. This ulcer is remarkable for being excessively painful, particularly on pressure, so much so that few patients have fortitude enough to permit the adoption of the most efficient plan of treatment—strapping. Now, in such cases your instrument would prove invaluable. By it the ulcer would be deprived of its sensibility, and the strapping (which is beneficial nearly in proportion to the tightness with which the straps are drawn) could be accomplished without any pain. With respect to the conditions necessary for the production of complete local anæsthesia in any of the external surfaces, it appears to me that the part to which the vapour is applied must be free from cuticle, or merely covered by a delicate pellicle, as in a recent cicatrix ; or, better still, that it should be in a granulating state. To expect that the agent should act through a thick cuticle, is unreasonable. How many remedies and plans of treatment have disappointed expectations simply from a want of due regard to the conditions essential to their success ?

Believe me very truly yours,

SAMUEL G. WILMOT.

Stephen's-green, August 3, 1854.

No. 19.—Chloroform Vapour in the insertion of an Issue.

(By M. DANYAN.)

“M. Richet said—I shall, finally, allude to the happy effects of the vapour of chloroform when thrown on ulcerated surfaces, which have been made known to us, by Dr. Hardy of Dublin, M. Moissenet and my colleague, M. Gosselin.

M. Danyan said—Having had to establish an issue on M. Roux, I made use of Dr. Hardy’s apparatus. I employed the Vienna paste. I directed the vapour of ether for ten minutes on the nape of the neck, where the issue was to be formed; the pain was completely annihilated.”—*Gazette des Hôpitaux*, June 13, 1854, p. 280.

No. 20.—A painful Stump treated by the Application of Chloroform Vapour.

(Under the care of M. LARREY.)

What appears certain is, that the vapour of chloroform freely directed to a painful point, immediately allays the sufferings of the patient. Thus at Val-de-Grace, after an amputation of the thigh, the stump having become excessively painful, M. Larrey made use of Dr. Hardy’s apparatus, and as soon as the vapour of chloroform came in contact with the wound, the pains were soothed.—*Journal de Médecine et de Chirurgie Pratiques*, March, 1854, p. 99.

REPORTS OF THREE CASES OF CARCINOMA TREATED BY LOCAL APPLICATION OF THE VAPOUR OF CHLOROFORM.

(From T. G. GEOGHEGAN, M.D., F.R.C.S.,
Surgeon to the City of Dublin Hospital and the Hospital for Incurables, Professor of Forensic Medicine, R.C.S.I.)

Dear Sir,—The appearance of your important observations on the local application of chloroform vapour has

led me to direct its employment in the cases of cancer at present under my care at the Hospital for Incurables. Although the trials which I have been as yet enabled to make have not been sufficiently numerous to furnish a just estimate of the value of your apparatus, I can, however, state, that the results already arrived at have been for the most part decidedly encouraging. I, therefore, feel desirous of submitting some of them to your attention.

No. 21.—Ulcerated Cancer of the Axilla.

In one case of extensive ulcerated cancer, involving the pectoral region, the axilla, and lower part of the neck, the application of the vapour (by means of the perforated ivory jet) was followed by speedy relief of pain, which the patient assures me continued for three days.

No. 22.—Ulcerated Cancer of the Lip.

In the second instance, where the disease has swept away the lower lip and chin, and which is attended by severe lancinating pain in the vicinity, the use of the vapour for about a quarter of an hour, was followed (to use the patient's description) by "a cool and numb feeling," extending through the affected part. The pain soon began to diminish, and in eight minutes had almost disappeared. Relief continued for several hours, when the pain returned severely. A subsequent application was followed by nearly similar results.

No. 23.—Ulcerated Cancer of the Mamma.

Wishing to observe the action exerted through the unbroken skin, I directed an application to the integument below the axilla of a female labouring under ulcerated cancer of the mamma. In one minute she experienced a

sensation of numbness in the part touched by the vapour ; in seven minutes this had spread along the whole arm, “as if streams of water were being poured upon it.” The pain by this time had but very slightly decreased, nor was there any further diminution of it. On a subsequent occasion, the vapour was applied to the *ulcerated surface* ; in one minute a feeling of warmth had spread down the arm ; in seven, the pain was distinctly less,* and in seventeen was greatly relieved. Like all other remedies, however, a beneficial action is not uniformly secured. Accordingly, in one case of cancer of the anus, perineum, and thigh, the patient states that she experienced no relief. I suspect, however, that in this instance the application was not continued for a sufficient length of time, nor was the vapour maintained by any appliance in contact with the surface. It strikes me that some arrangement by which the vapour might be effectually secured, and which would permit such continued pressure as would introduce it into the capillary circulation of the part, and hence bring it more intimately in contact with the nervous filaments, would add much to the value of your apparatus, and render the relief of pain more durable than I have found it in some cases. A frequent and careful observation of the action of anæsthetics encourages me in this belief ; for in some instances where the anæsthesia produced by these agents (introduced by inhalation) has been perfect, the action of the latter would appear to depend *exclusively*, or nearly so, upon their *direct circulation* through the superficial textures, and their consequent though indirect, application to the fibrillæ of the sentient nerves of the cutis. This is, I think, sufficiently evidenced by the singular phenomenon which has attracted the attention of operators as regards the action of sulphuric ether, and which I have myself more than once wit-

nessed in a striking manner—namely, the total absence of any disturbance of consciousness and volition, or indeed of any of the mental faculties, notwithstanding the completeness of the local effect above alluded to. This result, according to my experience, is much rarer under the influence of *chloroform*; and as it is precisely *that mode of action which is most desirable*, if it can be secured by the *local* application of the vapour even in but a proportion of the cases where pain is a prominent evil, much will have been gained. As facts accumulate, and a more extended use of local anæsthesia suggests further modifications of the apparatus, your method will, I doubt not, prove of permanent benefit in practice. As respects its application to operative surgery, although the local use of the vapour can scarcely be expected to offer an available substitute for inhalation in the greater surgical undertakings, yet from the facts that have come to my knowledge, I cannot doubt its promise of utility in the various minor operations.

I remain faithfully yours,

T. G. GEOGHEGAN.

York-street, July 5, 1854.

No. 24.—Cancerous Tumour in the Neck.

(Under the care of ROBERT MAYNE, M.D.,
Physician to the South Dublin Union.)

My dear Sir,—The case to which I yesterday alluded in conversation with you, was that of a lady who lately consulted me for a malignant tumour situated at the right side of the neck. Several consultations with Dr. Ireland, Mr. Cusack, and Sir P. Crampton, resulted in the decision that no operation was justifiable. I have seldom witnessed more poignant suffering than this lady endured for several months. Opium afforded her but little relief. Various

other sedatives and narcotics were also tried in vain, yet I can confidently assert that the chloroform douche never failed to alleviate her sufferings temporarily ; and of this she felt so thoroughly convinced, that for many weeks before her death she was in the constant habit of using it herself, by means of one of the instruments sold by Mr. Robertson. This case ran rapidly into open cancer.

Believe me yours very truly,

ROBERT MAYNE.

13, Upper Gloucester-street, July 18, 1854.

No. 25.—*Cancerous Ulceration of the Forehead, Orbit, &c.*

(By Dr. MOISSENET.)

The medical journals inform us that a Dublin practitioner, Dr. Hardy, has just invented an apparatus for the purpose of injecting the vapour of chloroform into the vagina in order to allay the violent pain caused by cancer of the uterus, and that it has completely succeeded. The results obtained by the Irish physician have led to several trials on the part of others, and in a note read at the Medical Society of the Hospitals, Dr. Moissenet has acquainted us with many very interesting cases, in which he has obtained, with Dr. Hardy's apparatus, effects truly unlooked for. He has succeeded, especially in a case of cancroïd ulcer of the forehead, which had successively invaded the orbit, the eye, and a portion of the cheek, in instantly and repeatedly allaying dreadful sufferings, which had resisted all known remedies.—*Gazette des Hôpitaux*, May 27, 1854, p. 252.

THIRD CONDITION.

THE EFFECTS PRODUCED BY THE VAPOUR OF CHLOROFORM
WHEN APPLIED TO MUCOUS SURFACES UNBROKEN.

Mucous surfaces seem to be particularly eligible for receiving the influence of chloroform vapour. When its local application was first brought before the notice of the profession, I alluded to the sensation of heat which was experienced when those tissues were subjected to its action. In some instances this is so great that it is complained of a good deal, but I have never met with any case in which it was necessary to relinquish its use on that account. Ceasing to propel the vapour for a few seconds was quite sufficient to enable the patient to bear it. The relief afforded is in general so agreeable that many would willingly endure a greater feeling of discomfort rather than be deprived of its efficacy. The following cases are given in illustration :—

No. 26.—Case of Painful Hæmorrhoids.

At a meeting of the Surgical Society already alluded to, Dr. Forrest detailed the following case :—

“ A gentleman, ætat. about 36, who had suffered from piles on several occasions, sent for me, owing to an attack of his old complaint. I found the mucous membrane of the anus everted, with several hæmorrhoids attached to it. The pain was so very severe, notwithstanding the use of fomentations which had formerly relieved him, that no pressure could be borne, nor any attempt be made to return them. The vapour of chloroform was then applied by the douche for several minutes, which produced so soothing an effect that I was able to press them within the sphincter without causing him any uneasiness.”

No. 27.—Pain in the Ear.

The following case shows the necessity of having the vapour propelled for a sufficient length of time:—

“A young lady, during the course of an illness, was troubled with very severe pain in the left ear, running down the side of her face, for which I directed the application of chloroform vapour. Next morning she told me it had given her no relief, and she continued to suffer as before. Supposing that the instrument had not been properly used, I applied it myself, and in about from five to ten minutes observed the countenance altering from an expression of pain to one of ease. Presently the lady said she was perfectly relieved.”

No. 28.—Case of Abnormal Sounds in the Ear.

The *Medical Times and Gazette* for June 17, p. 618, contains the report of a case of abnormal sounds in the ear, which had for six weeks resisted various remedies, as syringing, aperients, alteratives, and blisters. A few applications of the vapour of chloroform completely removed the complaint.

No. 29.—Case of Irritable Bladder.

A female patient, ætat. 37, the mother of one child, had suffered so much from irritation of the bladder for two years, but particularly during the month of July last, that her state was most distressing. The calls to micturate were incessant, and always attended with very severe pain. By means of a catheter attached to the douche, I threw the vapour of chloroform into the bladder, occasionally removing the nozzle of the douche from the end of the catheter, to allow the vapour to return. Great heat was at first complained of, but (by ceasing at intervals) the operation was continued for about five minutes. Next day the woman

informed me that after the application of the chloroform, she was able to walk a distance of about two miles without being under the necessity of relieving the bladder. When she did pass water, it was in much greater quantity than it had been for a long time, and attended with less pain. The vapour was used on the second day with like beneficial results. Afterwards hip-baths and diluents completed the cure.

No. 30.—Case of Spasmodic Pain after Delivery.

—, ætat. 26, nearly nine years married, had four children and several abortions; suffered much from great irritability of the uterus, which was affected frequently with congestion and excoriation. Previous to, and since marriage, menstruation was always exceedingly painful during the first day of its appearance.

On the second day after the birth of her second child, and while recovering favourably, she was suddenly seized with most excruciating spasmodic pains in the uterine region, recurring in paroxysms, which caused her to scream from intense agony. Fomentations, with the internal administration of spt. of turpentine, opium, &c., at length (in the course of about three hours) quieted this distress, and her recovery progressed as before. Within an hour after the birth of her third child, she had similar spasms, in character somewhat like after-pains, recurring in violent exacerbations, which lasted for about an hour, and again on the fifth day. The inhalation of chloroform was resorted to with good effect, always relieving her when so attacked.

On the fifth day after her last (the fourth) confinement, and without anything to account for it, the spasms set in with their usual violence, the distress felt in the situation of the anus being particularly severe, owing to the action of the sphincter. Inhalation of chloroform was resorted

to, which gave relief so long as the soporific state existed ; but no sooner did this go off, than the paroxysms were renewed. The vapour of chloroform was then thrown into the rectum by means of the douche for about five minutes, by which the spasms were not only relieved at the time of its application, but afterwards there was no return of them whatever, and the recovery was most favourable.

This lady when between seven and eight months pregnant on the last occasion, suffered greatly from vesical irritation. The calls to micturate were incessant, depriving her of all comfort by day and of rest at night ; so much so, that her general health seemed likely to suffer. The chloroform vapour thrown into the vagina for a few minutes at bed-time, procured for her so much relief that she was seldom disturbed, and had quiet sleep.

In my remarks on Cases 2 and 3 (*Dublin Journal* for Nov. 1853, p. 311), I made the following observations :—

“It is deserving of notice that in Case 2, the duration of the menstrual period was much lengthened, from which circumstance it may be inferred that the application has not only the effect of saving the patient from her usual degree of suffering, but by subduing the spasmodic action of the uterus, tends towards the production of a more natural secretion. As yet I have not had an opportunity of testing its efficacy thus in the patient of Case 3. It is her intention, however, to resort to its use when next about to menstruate, so that at a future time the results may be laid before the reader.”

Of Case 3, it is stated, “menstruation, both before marriage and to this time, was always very painful, the discharge *scanty*, and dysmenorrhœal membrane frequently expelled. Before detailing the progress of the case, I would beg to direct attention first to the following remarks on chloroform as an emmenagogue.

ON THE EMMENAGOGUE PROPERTIES OF CHLOROFORM.

In the *Hygeia* for February, 1854, p. 98, Dr. Gibson states "that inhalations of chloroform have an emmenagogue effect, and he relates five cases of irregular, insufficient, and wholly suppressed menstruation, in which this remedy was employed with good results. Van Dye confirmed this observation in a case of amenorrhœa, in which he made the patient inhale chloroform an account of spasms accompanying the amenorrhœa. The spasmodic symptoms which had occurred in various organs were removed, and after some time menstruation set in. Van Dye is therefore also of opinion that chloroform deserves especial attention as an emmenagogue."

The *Journal de Chimie Médicale*, April, 1854, p. 256, taking it from the *Medical Examiner*, adds: "A slightly prolonged inhalation of chloroform excited, at the end of twenty or thirty minutes, the flow of the menstrual fluid."

Chloroform is doubtless emmenagogue, like opium, valerian, ether, &c.; that is to say, it causes a cessation of the nervous alteration which opposes the menstrual flux. —*Journal de Chimie Médicale*, April, 1854, p. 256.

No. 31.—Painful and Scanty Menstruation.

When this patient (Case 3 continued) perceived the catamenial distress commencing, the application of the vapour was resorted to, and repeated on each return of uneasiness, by which she menstruated without any suffering. On the three following occasions it caused similar results, the secretion taking place in *proper quantity*, and free from pain. Her last two menstrual periods were perfectly natural in every respect, unaided by the use of chloroform.

No. 32.—Case of Painful Menstruation.

A patient, ætat. 31, married seven months to her second husband. By her first (with whom she lived nine years) she became pregnant soon after marriage, and aborted at the second month. Since then she did not again conceive, and menstruation which, previous to her pregnancy, had been healthy, regular in its returns, and without pain from the time of the miscarriage, had on its approach, and until after the first day of its appearance, been attended with distressing sensations in the back, loins, and particularly in her breasts. The use of chloroform vapour gave her perfect ease, relief on each application commencing first in the back and immediately after extending to the breasts.

No. 33.—Case in which Menstruation was Scanty and Painful, and finally Ceased.

—, ætat. 35, enjoyed excellent health; menstruated regularly for three days, and free from any discomfort until her marriage, which took place nine years ago. After this event, she gave birth to a male child, which lived for six months. During lactation, the catamenia appeared each month as formerly. From this time her health gradually declined, and in the course of a year, notwithstanding medical treatment, she was in a very debilitated state. I first saw her four years after her confinement. Pregnancy had not taken place; her menstrual periods in their approach, and while present, were accompanied with severe pains occurring at intervals, and the flow continued for scarcely one day. Ulceration of the os uteri, which I treated her for, soon got well, her health was restored, and she again conceived, but owing to an accident aborted at the third month. Although by the miscarriage her

general health suffered little, yet from this date menstruation steadily lessened in quantity, but was not attended with pain, until at length it entirely ceased, without there being any reason to attribute this circumstance to the existence of pregnancy. As the secretion diminished, her head and chest became very much affected with what she described as a "bursting sensation," which was particularly distressing at the time of each expected return of the catamenia. She was becoming very fat, and had a feeling of general discomfort. Various remedies had been tried in order to restore the uterine secretion and to relieve those uncomfortable sensations, but to no purpose. I now directed the vapour of chloroform to be thrown into the vagina when the next period was known to be approaching. On the first occasion menstruation was established and continued for two days: on the three following, the same means having been resorted to, it flowed for three days in proper quantity, and with the absence of all the uneasy feelings above described. It now comes naturally and without the use of chloroform, and in every respect her health is perfect.

No. 34.—Case of severe Uterine Pain, with Suppression of Menstruation.

A lady of strong and healthy appearance, residing in the country, consulted me in September, 1852. She had given birth to two children, and had aborted several times. Since her last miscarriage, which was caused by jumping from a height, she felt a disagreeable sensation, of a painful nature, in the uterine region, and menstruation becoming more and more scanty and irregular, had entirely ceased. She was very languid and incapable of much exertion. On examination, the os uteri was found extensively ulcerated and the cervix enlarged. Her health having improved, and

the uterus being healed, she returned to the country, where she made use of shower and hip-baths, and took gentle exercise on horseback, which served her greatly. Again her health declined, and she consulted a neighbouring practitioner, under whose treatment she continued for a considerable time. Afterwards she came to town, and informed me that owing to severe pain in her back and uterus, she was unable to sit for any length of time in the erect position, particularly in the evenings. All those symptoms were greatly aggravated periodically, when menstruation should be present. The uterus was rather larger than natural, but had no abrasion, and the cervical canal was pervious. I commenced the local application of chloroform vapour at the expected catamenial period. The following is the report given in a letter by the patient herself:—"It is with much pleasure I tell you the result of the chloroform ordered by you. While in town it enabled me to walk without pain in my back, or the very disagreeable internal pain, or *gnawing* feel, which I had for some time—I may say for years. I had not a change for the last twenty months; but having used the chloroform for ten days, it came on, which though scanty, I feel is all right. There was no pain whatever, as (when I began to feel uneasy) I used the chloroform. It has done wonders for me already."

I lately received the following letter from this lady:—

"I am able to take a great deal of exercise without fatigue, and when I have pain I use the chloroform, which has not in the least lost its effect, but soothes me at once." It is now five months since its application was commenced.

No. 35.—Violent Vomiting.

A patient, *ætat.* 20, was attacked in the month of

August last with gastric fever. For the first four days, irritability of the stomach was very great, nothing whatever being retained for more than a few minutes. The vomiting was most severe, and frequently occurred in violent paroxysms. The remedies usually resorted to in such cases, as ice, creosote, prussic acid, blistering, &c., were tried in vain. At this time, by means of the douche, the vapour of chloroform was thrown into the rectum for several minutes. It felt most agreeable to the sufferer, and in some measure mitigated the violence and frequency of vomiting. At intervals of an hour, the application was twice repeated. After the third exhibition of the vapour, all vomiting ceased; drinks and medicine were swallowed without exciting any tendency to it, and for a fortnight it did not return. So much relief was felt from first using the chloroform that the patient anxiously requested a repetition of it.

No. 36.—Painful Flatulent Distension of the Intestines.

A woman in Steevens' Hospital, under the care of Dr. Croker, in August last, for flatulent distension of the intestines, suffered so much from pains and disagreeable sensations that, in addition to the treatment adopted, the vapour of chloroform was thrown into the rectum by the douche, for about five minutes, three times daily. The patient for three hours after each application of the vapour, said she felt more ease than she had for months past. It was continued for some time, but whether it had lost its efficacy, or had not been properly used, she said it did not afford as much relief as at first.

No. 37.—Case of Bronchitis in an Infant, attended with Sleeplessness.

(Under the care of Dr. RINGLAND.)

A child, eight weeks old, attacked with bronchitis

through great distress from difficulty of breathing, arising from the enormous accumulation of mucus in the air-passages, as well as from general irritability during a period of seventy-two hours, never slept for a single moment, and was evidently sinking, chiefly from exhaustion from want of sleep. Many remedies were employed without the least benefit; at length a small quantity of chloroform vapour was injected into the rectum by means of Hardy's anæsthetic douche, ranging from six to nine jets. After an interval of less than fifteen minutes the child became more tranquil, and shortly fell into an uneasy sleep, which lasted nearly two hours. When it awoke it took the breast, which it had previously refused for several hours, having been fed with breast milk from the spoon. The vapour was again had recourse to in like manner as before, when the child, after a very brief space, fell into a quiet and almost natural sleep, which continued for several hours, and it became necessary to awake it to take nourishment. The chloroform vapour was frequently used in the subsequent progress of the case (which terminated favourably), and always with equal advantage. Had not rest been procured, the child must have sunk before there was time for the other remedies employed to have effect.—*Medical Press*, April 19, 1854.

[Under the 3rd Division—"The effect of Chloroform Vapour on Mucous Surfaces Unbroken"—the following cases may be referred to in the *Dublin Journal* for November :—Case 2. "Scanty and painful menstruation, in which the chloroform vapour enabled the patient to menstruate without pain, and lengthened the duration of it from one to three days." Case 5. "Violent Uterine Pain." Page 317, same number—"Case of Pruritus Pudendi." Two Cases of "Pain in the Ear."—*Medical Press*, April 19, p. 242.]

FOURTH CONDITION.

THE EFFECTS PRODUCED BY CHLOROFORM VAPOUR WHEN APPLIED TO MUCOUS SURFACES IN AN ABRADED OR ULCERATED CONDITION.

The vapour of chloroform when applied to mucous surfaces abraded or ulcerated, generally causes a good deal of the sensation of heat; but although this feeling is more frequent and of longer duration than where the surface is unbroken, it is not so extreme as to prevent patients from easily bearing it. The following cases will serve to illustrate its influence when applied under these circumstances:

No. 38.—Case of Ulceration of the Os Uteri.

A patient, the subject of very extensive ulceration of the os uteri, suffered so much from lumbar pain and general distress in the uterine region, that the vapour of chloroform was applied in the usual manner, by means of the douche. The heat and scalding sensation was so great that until after the lapse of half an hour from its application, no beneficial effect could be perceived. No sooner had the uneasiness caused by the chloroform subsided, than the relief was complete, and of very considerable duration.

No. 39.—Elongation of the Cervix Uteri.

On the 20th of October last, late in the evening, I was called to a patient who was suffering from violent expulsive pains, which I found on examination to depend on an elongated growth from the uterine cervix, so long that it protruded through the os externum. The mucous membrane of the uterus was abraded, and the vaginal canal felt extremely painful to the touch. By an opiate suppo-

sitory and draught, the pains were quieted, and the woman had a good night's rest. On the next day I placed a ligature on the tumour, and until the third day (when I removed it below the ligature by a curved scissors) the pains were on each return perfectly removed by the vapour of chloroform thrown into the vagina by the douche. No complaint whatever was made during its application to the abraded mucous membrane.

No. 40.—Cancerous Ulceration of the Rectum.

The *Medical Times and Gazette* for August 19, page 195, contains the results obtained by M. Gouzales Conde. It says :—"The Spanish professor has, after the example of the originator, Dr. Hardy, tested the local power of the anæsthetic to assuage the pains of cancerous ulcers. The cases were those of ulceration of the interior of the rectum, accompanied by most severe suffering, such as ordinary sedatives were insufficient to calm. M. Conde employed a bottle containing a sufficient quantity of chloroform. Its mouth was occupied by a well-fitting cork, through a hole in which a gum-elastic catheter was passed. The sound was introduced so far, that its apertures were in direct contact with the ulcerated surface. The vaporization of the chloroform was commenced; first, by the application of the hands to the bottle which contained it, then by bringing near it a heated stove. The patient experienced a slight pricking sensation, which took the place of the cancerous pains. This sensation extended upwards towards the colon. From the rectum some gas escaped, having the odour of chloroform. The sufferings were quickly appeased, but the most remarkable circumstance was that the pulse, which at the commencement of the experiment was accelerated, fell first to its natural

rythm, and then sunk to sixty beats in a minute. The ease, however, bestowed by the chloroform, was not limited in its duration by the effect produced on the pulse. For a week the pains did not return, nor was it necessary to reapply the anæsthetic for the whole of that period.—*El Heraldo Médico*, June, 1854, page 165.

[Under the 4th Division see also, in *Dublin Journal* for November—Case 1. “Cancerous Ulceration of the Uterus.” *Medical Press* for April 19th—“Cancer of the Rectum opening into the Vagina.”]

GENERAL OBSERVATIONS.

In making a few brief observations on the cases above detailed, I would direct the reader's attention to the remarkable influence exerted by chloroform vapour in cancerous ulceration. I may refer to Dr. Mayne's case (No. 24), in which he says, "opium afforded her but little relief, and various other sedatives and narcotics were tried in vain;" and (No. 25), where we are informed by Dr. Moissenet that "he has succeeded, especially in a case of cancrroid ulcer of the forehead, in instantly and repeatedly allaying dreadful sufferings, which had resisted all known remedies."

The duration of relief obtained by the application of chloroform vapour is very striking, and was one of the first things in its action that attracted my attention. In the *Dublin Journal* for November, page 308, I stated, "the relief afforded by the local application of the vapour of chloroform is not of a very transient nature;" as examples, see Case 5 in same journal, p. 315; No. 17 and 18 (Mr. Wilmot on Ulcers); Nos. 21, 22, and 23 (Dr. Geoghegan on Cancer of Axilla, Lip, and Mamma); No. 12 (Gout); and No. 30 (Spasmodic Pain after Delivery), in which there was no return of pain after its application. No. 38 (Ulceration of the Os Uteri), the "relief was complete, and of very considerable duration." No. 40 (Cancerous Ulceration of the Rectum), "for a week the pains did not return, nor was it necessary to reapply the anæsthetic for the whole of that period."

It is well exemplified also in the Cases of Neuralgia (5 and 7), the pain having returned in neither of those instances. In the Case of Gout (No. 12), the duration of relief was in like manner very long. I saw the gentleman, the subject of it, on the 20th of November. He told me (while sitting with his right foot and leg to above the knee in a vapour bath of chloroform and hot water) that he had tried every method of treatment for years, but had never received so much benefit as he had from the chloroform bath. From the time of its last application, he had been for twelve days free from pain, which was quite a novelty to him.

Although it is stated in No. 36 (Case of Painful Distension) that the relief was not as much after the application of the vapour had been continued for some time, I question whether it was properly applied on each occasion, having never met with another instance of diminished efficacy in its use. (It was the patient herself who generally used the douche.)

In the Case of Gout (No. 12), it is stated, "the part subjected to the vapour of chloroform had become pale and cold, instead of red and burning, as it had been before." As some might fear on account of the cold caused by it to resort to its application in gout, I may inform them that this obstacle can easily be removed (as in Case 13) by using the vapour douche, which has a small metallic ball attached. By heating this ball with a spirit-lamp, air of any temperature (most agreeable to the patient) may be transmitted with chloroform vapour. If desirable, moist, instead of dry, vapour can be formed by pouring a little water into the ball, and may be medicated by the addition of ext. of belladonna, watery ext. of opium, &c.

Of the painful affections in which the vapour of chloroform has been found to act beneficially, none are more

worthy of notice than those of cancer, neuralgia, and gout. In their treatment, particularly the two latter, the bath should be used frequently for some time without waiting for a return of pain; by this a considerable interval of relief may be obtained, and the pain might be permanently removed.

The vapour douche is so small that with all its fittings it could be easily carried in a small dressing case. A chloroform bath can be given with it instantly, and hot vapour, moist or dry, in about five minutes (the time required for heating the ball.)

As a means of alleviating pain during operations, the local application of chloroform vapour can be of service in but a very limited number of cases, and those only belonging to the minor operations in surgery, where the disease is superficial and the cuticle very thin or abraded. No. 11 (Mr. Smyly's Case) is an example of the first; and Nos. 15 and 16 (Anthrax), of the second requirement. The same remark is applicable also to No. 19 (Issue.)

No. 20 (Case of Painful Stump) serves to show of what great advantage it may be in gunshot wounds, where extraction of the ball is necessary; as well as in sabre and bayonet wounds. A stream of chloroform vapour passed into the wound might enable the sufferer to undergo the operation without the least pain.

Dr. Wilmot's cases prove how much pain might be prevented in many forms of surgical dressings, as of wounds, ulcers, &c. If to chloroform vapour that of hot water be added (regulating the temperature according to circumstances), and applied to dressings which have become stiff and adhering, their removal will be facilitated by the moisture, and the soothing effect of the chloroform on the tender parts may enable the patient to undergo the operation with

considerable comfort. When it is an extremity which is affected, an air-tight case of india-rubber sheet can be easily placed on it, which will greatly increase the efficacy of the vapour bath.

It was supposed that as the vapour of ether had caused griping when thrown into the intestines, that of chloroform should have had a similar effect. Nos. 35, 36, and 37, serve to show that this is not so, and we are informed by M. Ehrenreich of Germany (MEDICAL PRESS, April 12), that "he has found the most marked benefit from the local action of chloroform, more especially in the excruciating pains of tenesmus in dysentery."

The influence exerted on the uterine system by chloroform in allaying inordinate contractions, is exhibited by Nos. 30, 31, 32, 33, and 34. From this knowledge, a very important step might be taken in the treatment of patients who are the subjects of early abortion, and whose cases are so frequently mistaken for dysmenorrhœal affections. If, on the approach of a catamenial period, the vapour of chloroform be thrown into the vagina, which, acting as an antispasmodic, has the power of keeping the uterus at rest, the presence of the ovum may be prevented from exciting the contraction which otherwise would cause its expulsion; or those contractions which, established by habit, have the effect of causing abortion, might be kept so perfectly controlled that pregnancy may proceed without interruption. This remedy possesses advantages in such cases over opium and other narcotics, in that it exerts, when applied locally, no unpleasant effects; so that a patient can enjoy her usual sensations while the uterine system is *alone* under its influence. In cases of this nature particular instructions should be given to use the douche very gently.

When I first introduced the anæsthetic douche to the

notice of the profession, it was the opinion of many that placing cloths moistened with chloroform to the painful part was equally as efficacious a method of applying the vapour as by the douche. The gentleman of Case 13 told me he had used chloroform in this way, but had not reaped results in any degree to be compared with those obtained from its application by the douche. He described the sensation caused by the chloroform and hot water bath as being most agreeable.

When speaking on the method of applying chloroform vapour (as reported in the MEDICAL PRESS for April 19), I made the following remarks: "If the vapour is not confined, either no influence will be exerted, or to produce an effect, a very unnecessary waste of material must be the result; but besides confining it, a sufficient quantity should be thrown, and with a force proportioned to the extent of surface over which it has to pass." On referring to No. 2 (Dr. Kirkpatrick's Case of Tetanus), a glass bell was attached to the tube of the douche, that the vapour might not escape. In No. 4 (Phthisis), and in Nos. 17 and 18 (Mr. Wilmot's), the same precaution was observed. In Dr. Geoghegan's observations this point is particularly noticed; and in a Spanish journal (*El Porvenir Medico*), it is stated that "M. Figuier, with a view of favouring the absorption of chloroform, proposes to apply it at a temperature of 50 (122 deg. Fah.), and to confine it by means of an impermeable apparatus of gum-elastic."

Dr. Connor of Carlow has lately informed me of a case of *lumbago* under his care, which was relieved by chloroform vapour locally applied, after other remedies had proved unsuccessful.

The local application of chloroform vapour recommends itself to our careful attention, not only as a powerfully efficient and rapidly active agent, but as a remedy which

is as safe as efficacious. Twelve months have passed since it came into practice, and the foregoing cases may, in a measure, testify to what extent it has been tried, both at home and in other countries, during that time; but in no instance that has come to my knowledge has its use been attended or followed by either the slightest accident or injury.

Molesworth-street, November 30, 1854.

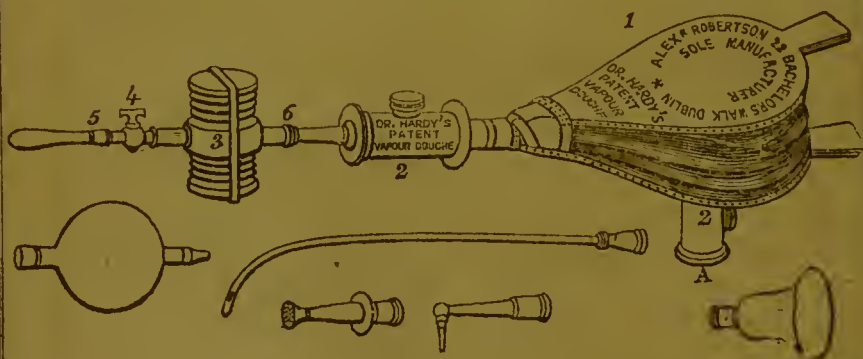
NOTE.—By the instructions of Dr. Smith, Director-General of the Medical Department of the Army, the wounded in the hospitals at Scutari are to have the use of chloroform vapour applied locally.



Dr. HARDY'S Anæsthetic Vapour Douche.



1. Small Pipe, containing a Valve (a) for transmitting the Vapour.
2. Air-valve. 3. Chamber containing within it a Sponge for holding Chloroform. 4. Screw-stopper for closing the Sponge-chamber.
5. India-rubber Bottle attached.



Metallic Ball. Tubes for transmitting Vapour. Bell-shaped Receiver.

1. Bellows. 2-2. Sponge-chamber. 3. Elastic Chamber. 4. Stop-cock.
- 5 and 6. Connecting Screws.



